

REMARKS

Claims 1-31 are pending. Claims 1-16 and 19-27 are rejected under 35 U.S.C. § 102(e). Claims 17-18 and 28-31 are rejected under 35 U.S.C. § 103(a). Examiner has maintained these rejections in an advisory action dated May 28, 2004. Applicant respectfully submits that previous claims 1-31 were patentable over cited references, but that Examiner did not give proper consideration to "predetermined frequency hopping pattern" as disclosed in the instant specification. Applicant has amended the claims, however, to more clearly specify the present invention.

Claims 1-16 and 19-27 are rejected under 35 U.S.C. § 102(e) as being anticipated by Kostic et al. (U.S. Pat. No. 6,549,784). Claims 1-16, as amended, recite "A method of controlling wireless communication from a first device to a second device via a wireless communication link, comprising: *receiving a frequency hopping pattern comprising a plurality of frequencies; obtaining information indicative of communication quality provided by one of said frequencies after the step of receiving; selecting a frequency from the plurality of frequencies on which to transmit a selected communication to the second device in response to the information indicative of communication quality; and transmitting the selected communication to the second device via the wireless communication link on the selected frequency at a time when the selected frequency is specified by the frequency hopping pattern for a transmission by the first device.*" (emphasis added).

Kostic et al. disclose "dynamically replacing system frequencies in use within selected frequency hopping patterns with system frequencies having lower interference levels." (col. 4, lines 46-50). Referring to Figure 4, Kostic et al. disclose "Frequency hop pattern adaptation module 426 determines which frequencies should be replaced and informs the frequency hopping module 430. Frequency hopping module 430 makes the appropriate frequency changes and uses processor 420 to transmit a message to frequency hopping module 428. This message instructs frequency hopping module 428 to make the same frequency changes." (col. 9, lines 41-48). This change of frequency hop patterns at adaptation module 426 of base station 404 must be communicated to frequency

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hopping module 428 of terminal station 402. If the resulting frequency hop pattern of Kostic et al. is taken as the step of *receiving* (claims 1-16), then Kostic et al. fail to disclose the steps of "*obtaining* information indicative of communication quality provided by one of said frequencies *after the step of receiving*" and "*selecting* a frequency from the plurality of frequencies on which to transmit a selected communication to the second device in response to the information indicative of communication quality" as required by claims 1-16. Although Kostic et al. disclose evaluating frequencies in their frequency hop pattern, they do not select frequencies from the frequency hop pattern in response to information indicative of communication quality. Once their frequency hop pattern is selected, all frequencies in that frequency hop pattern are used. If one of the frequencies is dynamically replaced, the result is a new frequency hop pattern.

Alternatively, if replacement frequency selection by Kostic et al. is taken as the step of "*selecting* a frequency from the plurality of frequencies on which to transmit a selected communication to the second device in response to the information indicative of communication quality" (claims 1-16), then Kostic et al. fail to disclose the steps of "*receiving* a frequency hopping pattern comprising a plurality of frequencies" and "*obtaining* information indicative of communication quality provided by one of said frequencies *after the step of receiving*" as required by claims 1-16). Kostic et al. disclose frequency replacement in an existing hop pattern that results in a new frequency hop pattern. The steps of *receiving* and *obtaining* (claims 1-16) apply to a frequency hop pattern from which the step of *selecting* takes place.

Finally, claims 1-16 recite "*transmitting the selected communication* to the second device via the wireless communication link on the selected frequency *at a time when the selected frequency is specified by the frequency hopping pattern* for a transmission by the first device." (emphasis added). The same frequency hop pattern, therefore, is used for the steps of *receiving*, *obtaining*, *selecting*, and *transmitting*. By way of contrast, frequency selection disclosed by Kostic et al. leads to a new frequency hop pattern. Thus, applicant respectfully submits that claims 1-16, as amended, are patentable under 35 U.S.C. § 102(e).

Claims 19-24 recite "A frequency hopping wireless communication apparatus, comprising: a wireless communications interface for *communicating* with a further frequency hopping wireless communication apparatus arranged to receive a plurality of frequencies via a wireless communication link *according to a predetermined frequency hopping pattern*; a scheduler for *selecting a frequency from the plurality of frequencies of the frequency hopping pattern* on which to transmit a selected communication to the further apparatus, said scheduler including an input for *receiving information indicative of communication quality* provided by one of said frequencies, said scheduler *responsive to said information for selecting the frequency from the plurality of frequencies of the frequency hopping pattern on which to transmit the selected communication*; and said wireless communications interface coupled to said scheduler and responsive thereto for transmitting the selected communication to the further apparatus on the selected frequency at a time when the selected frequency is specified by the frequency hopping pattern for a transmission by said wireless communication interface." (emphasis added).

As previously discussed with regard to claims 1-16, claims 19-24 are directed to an apparatus for communicating according to a predetermined frequency hopping pattern. The scheduler of claims 19-24 selects a frequency from the plurality of frequencies of the frequency hopping pattern. By way of contrast, Kostic et al. disclose "dynamically replacing system frequencies in use within selected frequency hopping patterns with system frequencies having lower interference levels." (col. 4, lines 46-50). Kostic et al. disclose changing a frequency hopping pattern to improve communication. Thus, Kostic et al. do not disclose selecting a frequency from a predetermined frequency hopping pattern as required by claims 19-24.

Moreover, claims 19-24 recite "transmitting the selected communication to the further apparatus on the selected frequency at a time when the selected frequency is specified by the frequency hopping pattern." Thus, the selected frequency and the transmission frequency are both part of the same predetermined frequency hopping pattern. Kostic et al. specifically teach away from communication according to a predetermined frequency hopping pattern as required by the present invention. Referring to Figure 4, Kostic et al. disclose "Frequency hop pattern adaptation

module 426 determines which frequencies should be replaced and informs the frequency hopping module 430. Frequency hopping module 430 makes the appropriate frequency changes and uses processor 420 to transmit a message to frequency hopping module 428. This message instructs frequency hopping module 428 to make the same frequency changes.” (col. 9, lines 41-48). This change of frequency hop patterns at adaptation module 426 of base station 404 must be communicated to frequency hopping module 428 of terminal station 402. Thus, applicant respectfully submits claims 19-24 are patentable under 35 U.S.C. § 102(e) over Kostic et al.

Claims 24-27 recite “A frequency hopping wireless communication system, comprising: a first frequency hopping wireless communication device; a second frequency hopping wireless communication device . . . including a wireless communications interface for communicating with said first device via said wireless communication link on *the plurality of frequencies according to a predetermined frequency hopping pattern*, and a scheduler for *selecting from the frequency hopping pattern a frequency on which to transmit* a selected communication to said first device, said scheduler including an input for *receiving information indicative of communication quality provided by one of said frequencies*, said scheduler responsive to said information for *selecting the frequency on which to transmit the selected communication*, said wireless communications interface coupled to said scheduler and responsive thereto for *transmitting the selected communication to said first device on the selected frequency at a time when the selected frequency is specified by the frequency hopping pattern* for a transmission by said wireless communications interface.” (emphasis added).

As previously discussed with regard to claims 1-16 and 19-24, claims 25-27 are directed to a wireless communication system, wherein a second frequency hopping wireless communication device communicates on a plurality of frequencies according to a predetermined frequency hopping pattern. The scheduler of claims 25-27 selects a frequency from the frequency hopping pattern on which to transmit in response to communication quality information. By way of contrast, Kostic et al. disclose “dynamically replacing system frequencies in use within selected frequency hopping patterns with system frequencies having lower interference levels.” (col. 4, lines 46-50). Kostic et

al. disclose changing a frequency hopping pattern to improve communication. Kostic et al. do not disclose selecting a frequency or transmitting on the selected frequency from a predetermined frequency hopping pattern as required by claims 25-27. Thus, applicant respectfully submits claims 25-27 are patentable under 35 U.S.C. § 102(e) over Kostic et al.

Applicant has acknowledges the rejections of claims 17-18 and 28-31 under 35 U.S.C. § 103(a), but considers them moot in view of the foregoing amendment.

In view of the foregoing, applicants respectfully request reconsideration and allowance of claims 1-31. If the Examiner finds any issue that is unresolved, please call applicant's attorney by dialing the telephone number printed below.

Respectfully submitted,



Robert N. Rountree
Attorney for Applicant
Reg. No. 39,347

Robert N. Rountree, LLC
70360 Highway 69
Cotopaxi, CO 81223
Phone/Fax: (719) 783-0990

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